



AF/1763
FFW

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants:

Steven A. VAN SLYKE, *et al.*

Group Art Unit: 1763

Serial No.: 09/996,415

Examiner: R. Bueker

Filed: 28 November 2001

Attorney Docket No.: 83401RLO
(Rossi Docket No: KODA:296)

For: THERMAL PHYSICAL VAPOR DEPOSITION SOURCE FOR MAKING AN ORGANIC LIGHT-
EMITTING DEVICE

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By: Marc A. Rossi

REPLY BRIEF

In reply to the Examiner's Answer

Sir:

The Examiner's Answer was mailed on February 27, 2004. A Reply Brief, as a matter of right, is filed within two months from the mailing date of the Examiner's Answer. No fee is due. Original and two copies of the Reply Brief are filed.

Examiner's Answer Overview

- I. In response to appellants' arguments that Spahn does not teach two independently controlled heaters (see Appeal Brief, p. 5), the examiner continues to argue that Spahn's top plate 20 and the housing 10 constitute discrete independently controlled heaters, relying on the disclosure of Spahn's column 5, lines 44-48 and column 8, lines 12-15.
- II. In response to appellants' arguments that Spahn does not teach two independently controlled heaters, as noted above, the examiner argues that it would have been obvious for Spahn to include two independently controlled heaters, relying on the combination of Figs. 6 and 9.
- III. In response to appellants' arguments that there would not have been any motivation to include two independently controlled heaters in Spahn, the examiner essentially argues that using two independently controlled heaters in Spahn would promote more efficient system or promote slow outgassing of trapped gasses in the bias-level heater.

APPELLANTS' REPLY

Appellants will now address sections I-III in the same order.

- I. Claims 1 and 2 each call for a bias heater power supply and a separate vaporization heater power supply. Spahn discloses that its top plate 20 and its housing 10 both can be heated, but using a same power supply. Even if the examiner's argument that the top plate and the housing provide different functions were to be deemed true for argument's sake, it nonetheless does not disclose or teach using two separate or discrete power supplies. What Spahn teaches is sharing the same power supply to heat both the top plate and the housing. Accordingly, Spahn does not disclose or teach this claimed feature. Indeed, the examiner acknowledged that Spahn does not teach using separate power sources for heating its top plate 20 and its housing 10. See page 5, lines 4-12, of the Examiner's Answer.

II. The examiner argues that the combination of Spahn's Figs. 6 and 9 would have taught using a separate heater to heat the housing 50. Specifically, the examiner argues that the embodiment of Fig. 9 uses a mirror coating 60 around the housing 50 to retain the heat instead of separately heating the housing itself. The examiner argues that since the embodiment of Fig. 6 discloses directly heating the housing itself, it would have been obvious to heat the housing in the embodiment of Fig. 9 instead of using a mirror coating. Appellants disagree with the examiner's assessment because the embodiment of Fig. 9 is specifically designed to use a single vaporization heater that uses radiation heating to bias-level heat the content in the container 50. Even if the examiner's argument were deemed to be true for argument's sake, the resulting combination urged by the examiner would be no different from that of Fig. 6. The embodiment of Fig. 6 teaches heating the housing using the same power supply used for heating the top. There is no teaching whatsoever in Spahn for using two discrete power supplies to separately heat the top plate and the housing. The examiner already admitted that Spahn uses a single power source for heating its top plate and its housing.

Further, appellants submit that the structure called for in claims 1 and 2 would not have been taught by the combination. In particular, claims 1 and 2 each call for an electrically insulative container disposed in the bias heater for receiving vaporizable solid organic material. The height dimension H_C of the container is taller than the height dimension H_B of the bias heater side walls. Appellants submit that Green would not have motivated Spahn to use a bias heater that is shorter than the electrically insulative container since Spahn specifically teaches using the same power supply. That is, Spahn would have taught the bias-level heating structure taught by Fig. 6, where the housing 10 extends fully to the top plate so that its flanges 11, 13 can be electrically connected.

III. Appellants have streamlined appellants' argument to *whether Spahn would have been sufficiently motivated to provide two discrete heaters, with independent power supplies*. In this regard, the examiner argues that using separate power supplies to separately heat Spahn's top plate and housing would have been advantageous for enhancing slow outgassing of gasses

trapped in the solid organic source material. Appellants disagree with the examiner's assessment because there is no disclosure or teaching anywhere that providing separate power supplies would have been advantageous or promote slow outgassing of gasses in a bias-level heater.

The reason why Soden uses two separate power supplies is to solve the condensing problem associated with changing or lowering of the temperature of the crucible once the vaporization temperature is reached. There is no such problem or issues associated with a bias-level heater, where the temperature is preset. Spahn is specifically designed to operate with a single power source so that the relative heating requirement between its container 10/50 and the top plate 20 is FIXED. Specifically, Spahn achieves a fixed relative heat setting by appropriately selecting the thickness of the resistively heatable top plate 20 and the wall thickness of the container 10. The setting remains fixed so that the top plate always runs at a higher temperature. Spahn simply has no need to deviate from its fixed relative temperature setting. Indeed, providing independently controlled temperature setting would be disadvantageous since an improper temperature setting could easily result from such an arrangement. One of ordinary skill in the art thus would not have been motivated to use separate power supplies in Spahn when a single power source clearly achieves the desired heat control and it has no problems associated with its heat setting, unlike the system of Soden.

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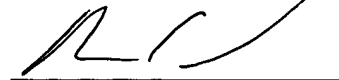
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Conclusion

For the foregoing reasons, appellants submit that the pending claims would have patentably distinguished over the applied combination. Appellants therefore respectfully urge the Board to reverse the rejection of these claims.

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Respectfully submitted,



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